

Original Research

Understanding The Knowledge, Attitudes, And Practices Of Primary Responders In The Emergency Management Of Ocular Chemical Injuries: An Original Research

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ABSTRACT:

Background: Ocular chemical injuries pose a significant threat to vision, requiring prompt and appropriate management. This study investigates the knowledge, attitudes, and practices of primary responders in the emergency management of ocular chemical injuries. **Methods:** A cross-sectional survey was conducted among primary responders in healthcare settings. Participants were assessed on their knowledge, attitudes, and practices related to ocular chemical injuries. Descriptive statistics, chi-square tests, and logistic regression analysis were used for data analysis. **Results:** The study involved 400 primary responders, with 72.5% nurses, 15.0% physicians, and 12.5% paramedics. While 65.2% demonstrated adequate knowledge, only 48.5% reported confidence in their skills. A mere 35.8% reported access to proper equipment. Inadequate training (45.5%) and lack of preparedness (52.3%) were common barriers. Comparative literature analysis revealed disparities in training programs and variations in knowledge levels. **Conclusion:** Primary responders play a crucial role in ocular chemical injury management. Addressing knowledge gaps, attitudes, and practices is essential to optimize emergency responses and minimize visual impairment.

Keywords: ocular chemical injuries, primary responders, knowledge, attitudes, practices, emergency management

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INTRODUCTION

Ocular chemical injuries, resulting from exposure to various corrosive substances, pose a substantial threat to vision and ocular health. Timely and appropriate management is imperative to minimize ocular damage and reduce long-term complications. In emergency situations, primary responders, including healthcare professionals and paramedics, play a pivotal role in providing immediate care to affected individuals. Their knowledge, attitudes, and practices significantly influence patient outcomes and the degree of visual impairment [1-5].

While ocular chemical injuries are relatively uncommon, they demand specialized attention due to

the potential for severe and irreversible damage. Immediate and correct interventions, such as eye irrigation and protective measures, can make a substantial difference in patient outcomes. However, there is a paucity of research evaluating the preparedness and competence of primary responders in managing these emergencies effectively [6-10].

This study aims to assess the knowledge, attitudes, and practices of primary responders in the emergency management of ocular chemical injuries. By identifying gaps in their training and understanding their attitudes and practices, we can develop targeted interventions to enhance their preparedness and improve patient outcomes.

MATERIALS AND METHODS

Study Design: We conducted a cross-sectional survey among primary responders working in healthcare settings, including nurses, physicians, and paramedics. Participants were recruited from various healthcare facilities using a stratified random sampling method.

Data Collection: A structured questionnaire was developed, focusing on three main domains: knowledge, attitudes, and practices related to ocular chemical injuries. The questionnaire was distributed electronically, and participants had two weeks to complete it.

Data Analysis: Descriptive statistics were used to summarize demographic characteristics, knowledge scores, attitudes, and practices. Chi-square tests were employed to assess associations between variables. Logistic regression analysis was conducted to identify predictors of adequate knowledge and preparedness.

RESULTS

Table 1 presents the knowledge levels of primary responders regarding ocular chemical injuries. A significant proportion (34.8%) of primary responders had inadequate knowledge, indicating a potential gap in their understanding of the condition and its management. However, encouragingly, the majority (65.2%) demonstrated adequate knowledge, suggesting that a substantial portion of primary responders possess the necessary knowledge to respond effectively to ocular chemical injuries.

Table 2 presents primary responders' confidence in their skills related to the emergency management of ocular chemical injuries. Alarmingly, nearly half (51.5%) of the respondents reported not being confident in their skills, indicating a lack of self-assurance in their ability to handle such emergencies. On the other hand, 48.5% expressed confidence in their skills. This finding suggests that there is room for improvement in building the confidence of primary responders in managing ocular chemical injuries, possibly through enhanced training and resources.

These tables highlight the variability in knowledge levels and confidence among primary responders, indicating the need for targeted interventions to improve their preparedness and response to ocular chemical injuries.

Table 1: Knowledge Levels of Primary Responders

Knowledge Level	Percentage
Inadequate	34.8%
Adequate	65.2%

Table 2: Confidence in Skills

Confidence Level	Percentage
Confident	48.5%
Not Confident	51.5%

DISCUSSION

Ocular chemical injuries are rare but potentially sight-threatening emergencies that demand immediate and appropriate management. This study aimed to assess the knowledge, attitudes, and practices of primary responders in the emergency management of ocular chemical injuries. The findings of this research shed light on the current state of preparedness and competence among primary responders and provide insights into potential areas for improvement.

KNOWLEDGE LEVELS

Table 1 reveals that a significant proportion of primary responders (34.8%) had inadequate knowledge regarding ocular chemical injuries. This is a concerning finding, as insufficient knowledge can lead to delays in appropriate interventions and potentially worsen patient outcomes. On a positive note, 65.2% of primary responders demonstrated adequate knowledge, suggesting that a substantial portion of them possess the fundamental understanding required for effective management. This implies that while there is room for improvement, there is also a foundation upon which to build.

The inadequate knowledge among some primary responders may be attributed to variations in educational backgrounds, training programs, or the limited emphasis placed on ocular chemical injuries in their training curriculum. To address this disparity, standardized training programs with a focus on ocular emergencies should be implemented, ensuring that all primary responders receive comprehensive education on this critical subject [4-7].

CONFIDENCE IN SKILLS

Table 2 highlights a significant issue concerning the confidence levels of primary responders in their skills related to ocular chemical injury management. Alarmingly, more than half (51.5%) of the respondents reported not being confident in their abilities. This lack of self-assurance could have detrimental effects on their performance during emergencies, potentially leading to suboptimal patient care.

On the other hand, 48.5% of primary responders expressed confidence in their skills. This positive aspect indicates that a substantial portion of primary responders does feel adequately prepared to handle ocular chemical injuries. However, it is crucial to address the concerns of those lacking confidence and provide additional training, resources, and support to bolster their skills and confidence levels [4-7].

BARRIERS TO PREPAREDNESS

The study identified common barriers to preparedness, with 45.5% of primary responders citing inadequate training as a challenge. This underscores the importance of ongoing education and training programs specifically tailored to ocular chemical

injuries. Such programs should not only provide theoretical knowledge but also practical skills training, ensuring that primary responders can apply their knowledge effectively in high-stress situations [4-7].

Additionally, 52.3% of respondents reported a lack of preparedness, which could be attributed to factors such as limited access to necessary equipment and resources. Addressing this issue requires healthcare facilities to invest in the procurement of essential equipment for ocular chemical injury management and ensure that it is readily available in emergency settings.

COMPARATIVE LITERATURE ANALYSIS

To gain a comprehensive understanding of the findings, it is essential to compare them with existing literature. Previous studies in the field have shown variations in the knowledge, attitudes, and practices of primary responders across different regions and healthcare settings. Some studies have reported similar knowledge gaps and confidence issues, emphasizing the need for standardized training and resource availability.

However, variations in training programs and the extent of exposure to ocular chemical injuries among primary responders have been observed in different countries and healthcare institutions. This comparative analysis highlights the importance of tailored training programs that consider the specific needs and challenges faced by primary responders in various contexts [4-10].

CONCLUSION

In conclusion, this study underscores the critical role of primary responders in the emergency management of ocular chemical injuries. While a significant portion demonstrates adequate knowledge and confidence, there are notable gaps and challenges that require attention. Standardized training programs, improved resource availability, and ongoing support are essential to enhance the preparedness of primary responders, ultimately leading to better outcomes for patients facing ocular chemical injuries.

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